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This publication sets forth the progress of social scientific research in identifyi g the components by which the degree of change in student personality, character, and values may be ascertained. It indicates the contributions made by recent studies to understanding of the factors influencing these changes during the student years.

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NEW DIMENSIONS in Higher Education

Number 4

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Impact of College

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
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Highlights

This report summarizes the progress of social scientific research in identifying the components by which the degree of change in student personality, character, and values may be ascertained. It indicates the contributions made by recent studies to understanding of the factors influencing these changes during the student years. It also permits estimates of the extent to which life patterns may be altered by attendance at college. The research cited indicates that:

1. Compared with freshmen, seniors generally have greater knowledge of their cultural heritage; more cultivated tastes and interests; increased attitudes of skepticism and criticism; but also increased tolerance, differentiation, and mastery of control. On the other hand, seniors evidence decreased authoritarianism and conventionality; decreased stereotypy in perception of roles; and decreased stability, possibly because of impending entrance into a life of broadened responsibilities.
2. Critical thinking ability and changes in attitudes and values are usually caught rather than taught. Student culture and teacher personality play more important roles than specific attempts to teach critical thinking techniques.
3. Throughout their later life, the outlooks of those who have attended college tend to correspond closely to the student culture of which they were a part and the "ethos of the times" of their college years.
4. Although assimilation into the student society is the foremost concern of most new students, the student body as an entity possesses characteristic qualities of personality, ways of interacting socially, and types of values and beliefs, which are passed on from one "generation" of students to another and provide a basic context in which individual learning takes place.

In the development of attitudes and values, the student culture in the college is the prime educational force at work. It is improved by the personal and interpersonal development of individual students during their student years; and its influence is radiated to society throughout the lives of those individuals, a continuous reflection of the impact of their attendance at a college of their choice.

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NEW DIMENSIONS in Higher Education

Number 4

Impact of College

by
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FOREWORD

WITHIN the past few years, several important studies have shed light on the sociology of higher education. These studies have suggested that students often pass through the elaborate and costly process of collegiate education without having their curiosity awakened, their creative abilities developed, or their sense of values enhanced. These recent investigations, utilizing the best available measuring instruments, have caused college administrators to look again, and with a more critical eye, at their total program of instruction and experience.

The research reported here suggests that institutions have three choices: (1) to ignore the subject of their impact on student values, attitudes, and creativity as too difficult to measure or control; (2) to make more modest claims regarding their impact on students; or (3) to study their impact on student values and take steps to increase it. It is hoped that this publication will assist college faculty and administrators in assessing their own influence on the student and in considering ways to increase and make more enduring the college's capacity for the development of human character.

The Mary Conover Mellon Foundation at Vassar College has been one of the leading centers for study of these problems. The author of this paper has been associated with the Foundation as a member of a team of investigators working together over a period of years. The material here published on the impact of the college on the student consequently reflects firsthand experience as well as familiarity with recent research. The author, Mervin B. Freedman, is Coordinator of the Mary Conover Mellon Foundation.

The editorial assistance provided by Mrs. Lanora G. Lewis in the preparation of this manuscript should also be recognized.

HOMER D. BABBIDGE, JR.
Assistant Commissioner for Higher Education

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THE IMPACT OF THE COLLEGE ON THE STUDENT

ONE COULD HARDLY HOPE to describe all of the relevant social scientific researches on college populations that have been carried out in recent years. It is the purpose of this paper to give an account of the more prominent of such researches into American higher education.

The findings would appear to be of considerable value to those who are interested in making changes of one sort or another in college procedures. A logical place to start in formulating plans as to how certain educational practices may be improved would seem to be with the knowledge of what actually takes place now in our colleges. How are students changed by a college experience or certain features thereof? Or what does a college education seem to mean to an alumnus 10 or 20 years after graduation?

Answers to such complex questions are, of course, not easily obtained. It can hardly be argued that at this time the social sciences can provide anything like an integrated picture of what happens in our colleges; but a compilation of the more prominent social scientific researches into college education comprises an impressive contribution to our understanding of the process of higher education in America.

A Brief History of Research in the Social Sciences and Higher Education

The more formally academic areas of higher education have received the most research attention. Thus, tests of achievement in one field or another are in a very advanced stage, and there is a considerable body of literature having to do with prediction of college grades on the basis of such factors as rank in one's high school class or scores on College Entrance Examination Board tests. The reason research on such matters is so far along is that it can be carried out with relative ease. Criteria of accomplishment or change are readily agreed upon, and the information necessary to the carrying out of the studies may be obtained with little difficulty. Perhaps the chief explanation for the many studies of prediction of academic success as measured by grades is the sheer avail-

ability of the material: someone decides that something ought to be done with all the information lying around the recorder's or admissions office.

Other kinds of studies present more difficulty. Evaluation of how students' personalities or characters change, understanding of the factors which influence them little or a good deal during the student years, or estimation of the extent to which a life pattern has been altered by attendance at college are complex issues. A study which sheds light on matters like this very likely requires much ingenuity and effort. Moreover, it is interesting to note that, for the past two or three decades until several years ago, social scientists displayed relatively little interest in research investigation of college education.

In the early years of this century our educational system was an area of lively concern for psychologists. Studies of intelligence, aptitude, and interest proceeded at a great rate. The classroom was used as a laboratory for investigations of principles of learning, the matter of transfer of training being an excellent example. Beginning around 1925 or 1930, however, interest in higher educational processes waned. Perhaps this was to a considerable extent a function of the increase in importance of dynamic or motivational psychology. With the increased emphasis upon the personality and the emotions, events of the college years were often viewed as mere unfoldings of powerful inner trends or as manifestations of important directions taken in infancy. Such an outlook tended to disturb educators who were sure that the occurrences of the college years were of great importance in their own right aside from their origins in earlier or infantile experiences. In recent years, however, as cognitive and motivational psychology have grown closer together and increased emphasis has been placed again, in psychology, upon the influence of the intellectual life upon the emotional, the interests of psychologists and educators have grown together increasingly.

The situation in sociology presents a similar picture. A summary of the history of sociological investigations of educational activities is contained in *Sociology and the Field of Education* by Orville G. Brim (9). Brim points out that John Dewey's writings, particularly *Democracy and Education* (22), published in 1916, served as a stimulus for much systematic attention to education on the part of sociologists. Between 1916 and 1925 "* * * numerous colleges began offering courses in sociology and education; the National Society for the Study of Educational Sociology was organized; the *Journal of Educational Sociology* was initiated; and approximately twenty-five tests or major treatises on sociology and education were published" (9, p. 9). But, as in the case of psychology, beginning

around 1930 interest in educational sociology diminished. Thus, Conrad (19) studied the content of articles appearing in the *American Sociological Review* for the decade 1940–50 and reported that only 2.3 percent of the articles dealt with the topic of sociology and education. As Brim points out, however, "An impressive change in the general situation has occurred since about 1950. It is accurate to say that there has been a rapid growth of interest in studies of the educational institution * * *." (9, p. 10).

In the last decade cultural anthropologists, sociologists, psychologists, and psychiatrists have devoted increasing attention to the study of colleges and college students. To a considerable extent this is a response to mounting concern on the part of educators with the procedures and results of our higher educational system. Thus, Fred M. Hechinger, education editor of the *New York Times*, had the following to say about a recent meeting of college presidents sponsored by the American Council on Education: "When college presidents meet, they agree that things are pretty bad * * *. Higher education seems to enjoy a strong dose of self-criticism" (39). It is interesting to note that this self-criticism tends to be a phenomenon *sui generis*. By and large our colleges have not been subjected to the public criticisms which have been heaped upon the high schools in recent years. There are a few vociferous critics of liberal education (15), but they tend to have little mass support. And the charges levelled (7) at our teachers' colleges are seldom generalized to include our liberal arts colleges and universities.

Despite the absence of strong external criticism, there is considerable feeling within our colleges that something is amiss. And this feeling has been a spur to research in the last decade. The time would seem to be ripe for a large number of collaborative research endeavors between social scientists and educators which will greatly expand our understanding of the higher educational system in the United States.

A Report of Research Findings

Like any complex institution in our society a college cannot simply be plucked from its surroundings for study—at least not without recognizing the artificial situation engendered by such action. College personnel—students, faculty, and administration—are part of American society and culture and are influencing American life and being influenced by it at all times. Similarly, one introduces artificiality by reducing a college system to its components and studying in isolation the structure and function of each in turn. Nevertheless, science proceeds by classifying and by dividing nature into relatively arbitrary units of study.

This is to point out that the rubrics under which the research findings to follow are presented have no special theory which underlies them. They follow a simple chronological scheme. First, the qualities of the entering student. This is followed by description of changes occurring during the college years. Then come studies of alumni. The units we have chosen for classificatory purposes—for example, personality, attitudes, or intellectual development—do not form part of a coherent system. Probably, at this stage of research investigation of the functioning of colleges, the fragmentary nature of the data would not allow otherwise. It is hoped that a growing body of research knowledge will speed the development of systematic and complex designs which will do justice to the workings of educational institutions in some more organized fashion.

The report of research findings to follow is organized under the following headings: (1) The Characteristics of the Entering Student; (2) Changes in Student Characteristics during the College Years, arranged according to (a) Changes in Mental Ability, Skills, and Knowledge, (b) Changes in Attitudes and Values, and (c) Changes in Personality; (3) Studies of the College as an Institution with emphasis on Student Culture and Characteristics of Faculty and Teaching.

The Characteristics of the Entering Student

The diversity of American colleges is a striking phenomenon. We have big colleges and small ones, men's, women's, and coeducational colleges, liberal arts and more technically oriented colleges, public and private colleges, and denominational and nonsectarian colleges, to list only some of the criteria by which we may distinguish among them. Of course, then, some diversity of student body is taken for granted. It is generally recognized, for example, that the students at some colleges are drawn from higher levels of social strata than at others, and that at some colleges the students are well above average in intellectual or academic orientation, while at others they are well below.

Only in very recent years, however, have we begun to receive detailed, systematic knowledge of the differences which exist among students in our colleges. For this information we are indebted primarily to the Center for the Study of Higher Education of Berkeley, Calif., and the National Merit Scholarship Corporation of Evanston, Ill. The research findings of these two organizations make very clear the enormous diversity of student characteristics which may be found among colleges and often within the same colleges. Students differ not only in intellectual capacity as meas-

ured by various tests but also in many other qualities which are highly revelant to the process of higher education.

In 1940 Traxler estimated that the range in average IQ among 323 colleges based on the American Council on Education Psychological Examination was from 94 to 123 (72). McConnell and Heist state that:

> * * * the differences in the intellectual characteristics of American colleges and universities are so great as almost to defy description * * *. In the single State of California, one finds a range of over three standard deviations * * * in the mean aptitude scores of entering freshmen among all institutions. In another State, the mean freshman score in the most selective institution was a standard deviation above that of the least selective institution. The mean ACE scores of freshmen in the Protestant and private liberal arts colleges of the North Central Region varied from 94 to 123. * * * The variation in means in the Northeast for the same type of schools was from 111 to 131. In the South, excluding Negro colleges, it was from 68 to 123.
>
> So great is the range of average ability of students among liberal arts colleges that although they may be similar in structure, professed purposes, and curricular organization, the intellectual resemblance is superficial indeed. In the intellectual demands these colleges can make on their student bodies they are most dissimilar.
>
> * * * Institutions also differ in degree of internal variability. The dispersion of academic aptitude is greater in some colleges and universities than in others, and relatively more homogeneous student bodies may be found among colleges at either extreme of selectivity. But even in the least heterogeneous institutions there are still wide differences in ability. To cite the extreme, we found certain freshmen attending colleges in which their measured aptitude was a full standard deviation above that of the next highest student in the distribution (50).

Heist and Webster (42), Clark (18), Holland (43), and Thistlethwaite (66) have noted striking differences in students both within the same institution and among colleges in characteristics other than direct intellectual performance or capacity. Thus Holland has the following to say about national merit scholars or near-winners (the Certificate of Merit) who choose colleges which rate high in production of scholars who go on to graduate school and obtain the Ph.D. degree:

> To summarize, the selection of an institution with a high rating on the Knapp-Goodrich or Knapp-Greenbaum indexes conforms to a pattern indicative of less concern with externals and more concern with intellectual values. Mothers have a high level of education, and both parents express preferences for a small college which will develop the student's intellectual capabilities. Their children, too, desire a small college, and one which has a high academic standing. The personality scores of these students imply capacity for achievement and creativity. This interpretation is reinforced by their preferences for pure rather than applied science and their relatively long-term academic goals. In contrast, the choice of an institution with a low rank is related to personality patterns less favorable for intellectual achievement (43).

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Similar personality differences between students who select colleges which rank high in production of scholars who obtain the doctorate degree versus those who choose colleges which rank low were found by Heist (41). He observed that high-ranking institutions have students who are more socially introverted, more complex in their outlook and perceptions, more original, and less authoritarian.

Holland finds other differences among students who attend various types of colleges; for example, private versus public or religious versus nonsectarian institutions. He has the following to say about national merit scholars or certificate of merit winners who choose private rather than public colleges:

> In summary, the selection of a private institution is correlated with a high socioeconomic status pattern. Parents have high incomes, advanced education, and many books in the home. They see college training as a way to develop moral standards and intellectual abilities, and to learn how to enjoy life. Their ideal college is a high-cost institution which is private, single-sex, away from home, and noted for its liberal arts training. Their children reiterate these goals and values in explaining their selection. Unlike students selecting public colleges, they aspire to higher educational degrees, have more verbal ability, and are characterized by personality traits which are associated with higher academic achievement (43).

The Mary Conover Mellon Foundation for the Advancement of Education at Vassar College has evidence of quite remarkable diversity in personality characteristics among students in various women's colleges. These colleges are comprised of students who are very similar in terms of socioeconomic and cultural background and in general intellectual level. Nevertheless, mean scores for entering freshman classes may differ widely from college to college. For example, the mean score on the Vassar Developmental Scale of the entering freshman class at one of these colleges exceeds that of the graduating senior class at another. (The Vassar Developmental Scale consists of items which differentiate freshmen from seniors at Vassar College. Its content will be described later.) One may conclude that the freshman classes at institutions which display such widely divergent test results are in quite different stages of maturity or development at the time of college entrance. Their approaches and attitudes to learning and college experience are likely to be highly dissimilar. One group may be no less educable than another, but perhaps different educational procedures are called for in dealing with them.

Such findings about the diversity of intellectual and personality characteristics among students pose many problems for the educator. Is a wide range of intellectual talent among the student body an aid or handicap to the process of education? Fricke (35) suggests that colleges should select from a limited range of ability. A correlative suggestion might well be that colleges with student

bodies differing widely in intellectual capacity pursue different educational goals. That is, should a college which contains a student body whose mean IQ is 100 attempt to do the same things as a college which has a student body whose mean IQ is 125?

In addition to problems of evaluating the importance and effects of intellectual homogeneity and heterogeneity among students, what of the matter of personality characteristics which have important consequences for education? As we have seen, even when intellectual level is held constant, students and student bodies may differ widely in such ways as degree of readiness for new experience, interest in practical versus more liberally oriented education, or orientation to graduate or professional schooling or further learning. And what of the problem of the individual who is markedly different from his fellow students in various ways, for example, the student who is much brighter than almost every other student in his class or perhaps much more attuned to the more liberal rather than practical aspects of education? Clearly, these are matters which require much research and much thought on the part of educators.

Changes in Student Characteristics Occuring During the College Years

Some of the changes which take place in college students between the years 17 or 18 to 21 or 22 are certainly unrelated to college experiences; that is, they would take place even in the case of individuals not in attendance at college. Unequivocal empirical determination of the differential effects of college experience are impossible to attain. Required for such a study would be two groups of high school students alike in every way except that one goes on to college, while one does not. The very fact that students choose not to go on to college makes them a somewhat inadequate control group. Nevertheless, high school graduates who do not go on to college should be compared with those who do. And students in many different kinds of colleges should be compared for their similarities and differences. In such fashion a great deal could be learned about the special nature of college influence.

In the discussion to follow the changes in student characteristics occurring during the college years are discussed under three headings: Changes in Mental Ability, Skills, and Knowledge; Changes in Attitudes and Values; and Changes in Personality.

Changes in Mental Ability, Skills, and Knowledge

Knowledge of our cultural heritage is, of course, one of the primary aims of college education and undoubtedly the goal upon

which almost every educator will agree. Achievement tests which measure the extent of knowledge in various fields are highly developed. This paper will make no attempt to summarize or evaluate such studies except to quote Dr. C. Robert Pace of Syracuse University (54) on the subject of results based on such tests: "On the basic objective which we might call the transmission of significant knowledge, the colleges are in fact successful. With almost no exception across the country where *achievement* testing has been applied, the average scores of seniors, juniors, and sophomores are *significantly* higher than the average scores of freshmen—whether tested cross-sectionally or longitudinally."

In addition to increased knowledge of content or subject matter as measured by achievement tests, there is the very large area of other kinds of goals of liberal education, such as improvement in the ability to think critically or communicate effectively. The Committee on Measurement and Evaluation of the American Council on Education has sponsored a considerable amount of research in an attempt to ascertain the degree to which such changes take place in college students. Probably the most comprehensive survey of this type of research is contained in *General Education—Explorations in Evaluation* by Paul L. Dressel and Lewis B. Mayhew (23). This book contains an account of 11 years of investigation of programs of general education, surely one of the most ambitious and complicated educational researches ever carried out.

A sample of the contents of this book follows:

> After considering a number of objectives frequently claimed for general education courses in social science, the Intercollegiate Committee on Social Science Objectives selected critical thinking for its area of partiular inquiry. The meaning of critical thinking in social science was specified in a list of abilities and was then exemplified by test situations and examples of student behavior. After the members of the committee were convinced of the validity of their conception of critical thinking in social science and had tried out on students various kinds of appraisal techniques, an objective-type test of critical thinking in social science was developed, revised, and printed in a final form. This test was administered to a great many entering freshmen at a number of participating colleges, and to these same students or to comparable groups at the end of the freshman year and at the end of the sophomore year. The changes in test scores over these time intervals were studied with a view to determining their magnitude and the factors associated with them. In general, it was found that students gained in ability to think critically in social science over a period of a year, although the size of these gains varied widely, depending on the institutions that students attended. Attempts to teach critical thinking in social science by making minor changes in particular courses did not appear to result in greater growth than was found in courses not making overt attempts to teach this skill. Attempts to relate growth in critical thinking ability to course organization or to specific teachers suggested that both of these were highly important, although the research could not identify specific factors that seemed to be operative (23, p. 66).

In recent years the development of basic mental abilities after the age of 17 or so has received increased attention. Allied to this has been the interest, in the last decade, of social scientists in investigation of the qualities of creativity and originality. Explorations in these areas will undoubtedly have profound implications for higher education.

It has been widely believed that increments of improvement in intellectual functioning are negligible after ages 14 to 17 or thereabouts. Thus, no less an authority on the development of intellectual functions than Piaget says:

> * * * this work seems to imply that the thinking of the adolescent differs radically from that of the child * * * he gradually structures a formal mechanism (reaching an equilibrium point at about 14–15 years) (45, p. 335).

Of late there has been some disposition on the part of psychologists to question this view. With regard to the notion that increments of improvement in intellectual functioning are minimal after the age of college entrance, Webster (74) has this to say:

> It seems safe to conclude, however, that this is an over-simplification, and that the maturation of mental ability continues well into the college years * * *. We may learn more about the details of this when ability testing itself has become a more mature science * * *. Learning and mental ability are both in a highly undeveloped state in college freshmen in comparison with older students. Moreover, there is some evidence that the higher the potential mental ability, or capacity, the less likely it is to have been approximated at the time of admission to college.

Along with this revision in thinking about the maturation of mental abilities, there is a renewed interest in the phenomenon of transfer of training. As is well known, throughout the 19th century and part of the 20th the classical school or college curriculum had been defended by "traditionalists" on the grounds of mental discipline. As the field of intelligence and abilities testing developed under the stimulus of the work of Galton and S. McKeen Cattell, a series of researches was carried out which questioned the whole notion of the older faculty psychology with its transfer of training principle. These researches reached their height with Thorndike and Woodworth (68, 69), and by 1920 the argument that there could be a universally valuable mental training seemed to be pretty well demolished.

In 1950, however, Guilford suggested that a reformulation of the problem of transfer of training was needed. He commented as follows:

> Before we make substantial improvement in teaching students to think, in my opinion we will have to make some changes in our conceptions of the process of learning. The ancient faculty psychology taught that mental faculties grow strong by virtue of the exercise of those faculties. We all know

> from the many experiments on practice in memorizing that exercises in memorizing are not necessarily followed by improvement of memory in general. We all know that exercises in perceptual discriminations of certain kinds are not followed by improvement of perceptual discriminations in general * * *. Following this series of experiments the conclusion has often been that learning consists of the development of specific habits and that only very similar skills will be affected favorably by the learning process.
>
> In view of the newer findings concerning primary abilities, the problems of formal discipline take on new meaning, and many of the experiments on the transfer of training will have to be reexamined and perhaps repeated with revised conditions * * * the other alternative to the idea of formal discipline is not necessarily a theory of specific learning from specific practice.
>
> There is certainly enough evidence of transfer effects * * *.
>
> A general theory to be seriously tested is that some primary abilities can be improved with practice of various kinds and that positive transfer effects will be evident in tasks depending upon those abilities (38).

The time would seem to be ripe for empirical reexamination of this most important area. Research findings here could conceivably lead to major curricular changes. One such empirical investigation is that being carried out in the Detroit public schools by Thelma Gwinn Thurstone (70). Jerome Bruner and his colleagues at Harvard University have been conducting experiments in recent years on many aspects of the processes of thinking and learning including transfer of training (12, 13, 14).

As has been mentioned earlier, the problems of prediction of college performance, as measured by grades, on the basis of such factors as high school grades or scores on College Entrance Examination Board tests have been quite extensively investigated. This literature is summarized in an article by Travers (71). Considering the generally recognized limitations of grades, it is surprising that so few studies have been carried out which entail some criteria of college achievement or performance other than grades. Perhaps the only study of this kind is one carried out by the Mellon Foundation at Vassar College under the direction of Donald R. Brown (11).[1]

This study centered on the characteristics of students who were judged by members of the Vassar College faculty to approximate very closely their image of the "ideal student." It is interesting to note that only slightly more than half the students so nominated had grade point averages of 3.0 (corresponding to an A average). Dr. Brown studied the characteristics of four groups of students—those who were nominated and who had grade point averages of 3.0, those who were nominated and who had lower grade point averages, those students who had grade point averages of 3.0 and

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[1] This research was supported in part by a grant from the College Entrance Examination Board.

who were not nominated, and a random sample of the remaining students.

The results of this study shed light on diverse elements of student development which are often obscured by attention to academic progress as measured by grades alone. Thus, students nominated as "ideal" who had grade point averages below 3.0 are described as "higher on impulse expression, lower in authoritarianism and ethnocentrism, higher in social maturity, and have a factor pattern which would indicate a personality more tactful about describing self and others, more perceptive, aware of strong impulses, more realistic, and more mature than their nonnominated peers and for that matter than their nominated above 3.0 peers" (11, p. 33). As compared to nonnominated students those nominated are "lower on authoritarianism and ethnocentrism, higher on developmental status and social maturity as both freshmen and seniors, and less integrated into the Vassar peer culture as freshmen" (11, p. 38).

Although studies of academic performance as evaluated by measures other than grades are extremely rare, some recent studies have centered on personality and nonintellectual factors associated with underachievement or overachievement. Underachievement and overachievement are, of course, attainment of grades higher or lower than would be anticipated on the basis of high school grades or aptitude and achievement test scores.

Prominent among these studies are those carried out by research workers on the staff of the Division of Student Mental Hygiene, Department of University Health, Yale University (52, 57, 58, 59). In one of the latest of these studies, Rust reports on a study of under-, normal-, and overachievers in Yale College and Yale School of Engineering. "* * * in the face of pressure from peer groups * * * overachievers are less likely to give in to such pressure. This would seem to demonstrate a certain self-propulsion which operates even when adult supervision is absent or diminished * * *. Overachievers * * * were less likely to report that they smoke or drink or that they have had sexual intercourse * * *. Overachievers are more likely to have selected an occupation * * *. Overachievers are less likely to have a Yale father, are more likely to have attended high school only and are less likely to expect help from their family, relatives, or from close family friends in getting their first permanent job" (59).

Changes in Attitudes and Values

Aside from the more formal academic types of studies, for example, prediction of academic success, the area of attitudes and

values has perhaps received more attention than any other over the last two or three decades. Thus, although college experience was quite neglected on the whole by social scientists in the decade 1930 to 1940, a number of social psychologists were at work in this period assessing such matters as liberalism versus conservatism in economic outlook, attitudes toward minority group relations, or views on military service, war, pacifism, and the like, and changes in these during the college years (3, 8, 20, 28, 29, 44, 47, 48).

Undoubtedly the most prominent work in this field in recent years has been *Changing Values in College* by Philip Jacob (46). This book contains an account of a large number of recent researches into the attitudes and values of American college students. The studies upon which Jacob relies most are those by Dressel and Mayhew (23) and the Cornell Values Survey being carried out at the Social Science Research Center of Cornell University by Rose K. Goldsen, Morris Rosenberg, Edward A. Suchman, Robin M. Williams, Jr., and their colleagues (17, 56).

Jacob's general findings may be summarized as follows: There is a profile of values which holds for 75 to 80 percent of all American college students, a campus norm of values which prevails in the 1950's, coast to coast, at State university or denominational college, for the ivy leaguer or city college commuter. The current student generation, he says, is gloriously contented in regard to its present day activity and its outlook for the future. Students are unabashedly self-centered in outlook, aspiring above all to material gratifications for themselves and their families. Though conventionally middle-class they have an easy tolerance of diversity and are ready to live in a society without racial, ethnic, or income barriers. The traditional moral virtues, such as sincerity, honesty, and loyalty are highly valued, but there is little inclination to censor laxity, which students consider to be widespread. A need for religion is generally recognized, but students do not expect religious beliefs to govern decisions in daily living. Rather, they anticipate that these decisions will be socially determined. The general tendency is to be dutifully responsive toward government, but there is little inclination to contribute voluntarily to the public welfare or to seek an influential role in public affairs. Attitudes toward international affairs are strangely contradictory. Another war is predicted within a dozen years, yet international problems are the least of the concerns to which students expect to give attention in their immediate future. Finally, students tend to set great stock by college in general and their own college in particular, regarding vocational preparation and skills and experience in social relations as the greatest benefits of college education.

With regard to changes in attitudes and values that may occur during the college years Jacob has the following to say:

> The main overall effect of higher education upon student values is to bring about general acceptance of a body of standards and attitudes characteristic of college-bred men and women in the American community. There is more homogeneity and greater consistency of values among students at the end of their 4 years than when they began. Fewer seniors espouse beliefs which deviate from the going standards than do freshmen (46, p. 6).

For the most part there is no disposition on the part of educators and research workers to disagree strongly with Jacob's conclusions. Some critics are of the opinion that Jacob is somewhat overly censorious. David Riesman (55), for example, points out that students are not materialistic in the sense of desiring great wealth or power and are not self-centered in the sense of lack of any concern with community affairs. Rather they desire to live lives centered on the welfare of their families and the local communities in which they live. Riesman also points out that Jacob's emphasis on the uniformity among college graduates tends perhaps to obscure the fact that college probably has made some difference in that college graduates differ in important ways from the noncollege elements of the population, even though these differences may not be marked. Some of these differences will be discussed in a later section on studies of alumni. Despite these and other criticisms there does seem to be substantial agreement with Jacob's view that college students in general are lacking in idealism and strong internal principle and that the effects of college upon attitudes and values are often minimal.

Jacob's material is supported by a valuable study carried out by Gillespie and Allport (37). By means of a specially designed questionnaire they surveyed the views on the future of college and university students in 10 countries including the United States. What most sharply distinguished the American students from those of most other countries was their accent on what Gillespie and Allport call "privatism." This is what Jacob called unabashed selfishness. It is the inclination to seek a rich, full life for one's self and one's family; to think in concrete and practical terms about the material benefits—job, home, facilities for recreation—that one expects to attain and enjoy. And this while remaining unconcerned about important social problems. This is in marked contrast to the outlook of students in relatively backward countries, for example, Mexico, whose fondest hope often is to contribute something to the country, to help eliminate poverty or disease or help raise the standard of living. Gillespie and Allport also supplied evidence in support of the common impression that French and German students

often see the future primarily as an opportunity for "building their characters" or "developing their personalities," qualities that were very rare in the responses of American students.

It would seem that in our college students of today we have a pattern of attitudes and values that is distinctive. By noting that student outlooks differ from one country to another we gain an important lead in the understanding of the American students of today. They must be understood, in part at least, as products of traditional American culture and as people who are responding to the present condition of American society. To put this in another way, we must recognize that what happens in our colleges is very much a function of what is happening in our American society at large. The ethics of the times is reflected in what college students value and how. The striking correspondence between the outlook of college students and events on the national or even international scene is demonstrated in a study of Vassar alumnae carried out by the Mellon Foundation (32, 33). The attitudes and opinions of Vassar alumnae in various important realms—religious, social, political, and the like—have been surveyed for all decades going back as far as 1904.

This correspondence between the outlook of college students and the spirit of the times is illustrated by the results obtained with the alumnae of the early forties, the classes of 1940 through 1942. Of all groups of alumnae studied, and as compared to Vassar students of the last 5 years, this group of alumnae is the most internationally minded, the one with the most faith in science and reason, the least ethnocentric, the most realistic or least blindly romantic. The following statements are examples of items taken from the questionnaire used in the survey.

The alumnae of the early forties disagree most with this statement: "Obedience and respect for authority are the most important virtues that children should learn." The alumnae of the early thirties match the alumnae of the early forties in being most rejecting of this belief: "Science has its place, but there are many important things that can never possibly be understood by the human mind." The alumnae of the forties disagree most with the idea "Now that a new world organization is set up, America must be sure that she loses none of her independence and complete power as a sovereign nation," and also with the statement "What this country needs more than laws and political programs, is a few courageous, tireless, devoted leaders in whom the people can put their faith." It is interesting to note that the internationalist and politically liberal outlook of the alumnae of the forties is not accompanied by an equally liberal outlook in economic matters. These alumnae dis-

agree most with the opinion "It is up to the Government to make sure that everyone has a secure job and a good standard of living."

In accounting for the general outlook of the alumnae of the early forties it does not appear that experiences appreciably prior to college, for example in childhood, or experiences subsequent to college explain this outlook as well as do events on the national and international scene circa 1940. The alumnae of the early thirties, the Classes 1929–35, were studied when their average age was 43. The alumnae of 1940–42 were studied when their average age was 36. It is not likely that the differences between these groups that are found in adulthood are consequences of differences in upbringing in the period after 1910 rather than after 1919 or as consequences of appreciably different life experiences for women who average 43 rather than 36 years of age, particularly when the outlook of the alumnae of the early forties corresponds so closely to the ethos of the times—the brotherhood of man, fervent democratic idealism, imaginative postwar planning, and the like. The evidence seems to be preponderantly in the direction of the effect of events at large on the opinions and beliefs of the students in school at Vassar in the early forties, and—remarkably, perhaps—the persistence of these opinions and beliefs over a period of some 15 years.

Thus, in considering the origins of the opinions, attitudes, and beliefs of current American students the Mellon Foundation is very much inclined to give considerable prominence to American culture and tradition, to the recent history and current state of American society. It would seem that in order to understand the situation and outlook of today's students one must consider, at least, our stage of industrialization, some of the consequences of mass communication and mass culture, and the present era of internal stability with prosperity and peace (albeit an uneasy one) following a long period of depression, war, and intellectual ferment. Several publications of the Mellon Foundation discuss these matters (16, 31, 60, 63), particularly one by Sanford (60) from which the following passages are quoted.

> Concerning the state of industrialization in this country it seems an understatement to say that it is very advanced indeed. What concerns us here is not the unparalleled output of goods but the degree to which human activities are organized in our society. When a college student looks at the vast impersonal processes of our society and asks where he can fit in, he is not necessarily open to the criticism of being a mere conformist. Perhaps he is being realistic. Perhaps he sees that we live in a society which to an increasing extent organizes intelligence rather than one which intelligence organizes. Opportunities for individual initiative or for the exercise of talent on one's own terms have actually decreased • • • so has the number of social or professional roles we can take. The student looks at some areas of social or political or economic process and asks, "What can one person

do?" Before we berate him or her for indifference, or passivity, or apathy, let us consider that it probably *is* much more difficult for one person to make an impact on social processes than it used to be.

With our advanced industrialization go the extraordinary phenomena of modern communication and of standardization in our civilization. These are not necessary evils in themselves, but they have had one effect in the colleges that is somewhat depressing; that is, colleges no longer get those diamonds in the rough who provided such joy for the teacher—men and women from various traditional backgrounds, so far "unspoiled" by the more effete, modern ways, but intelligent and eager, ready to shine under the teacher's devoted hand. Today the boy from the lower East side or the girl from Rabbit Ears Pass arrive with much the same material baggage and cultural stigmata. It has become much harder and much less interesting to tell where a student comes from. This uniformity is not primarily the result of any psychological need to conform. I should doubt that this need is very different from that found in students of 20 or 30 years ago. It is rather that today's students live in a less differentiated society: there are fewer patterns with which to conform.

An aspect of our mass culture that ought to be mentioned is the popularization of psychology, or perhaps more appropriately, of a psychology of adjustment. Of course, the value for fraternity, for 'getting along with others' has been an important aspect of American culture from the beginning. Probably the accent on this value has been increasing in recent years. There has been for some time a vast body of literature on how to bring up children, how to achieve harmony in the social group, how to adjust one's personality, and so on. I believe this has had a very considerable effect. The home, the school, the college seem far more adept than they used to be at keeping everybody happy. Certainly college students at the present time exhibit far more social skill than those of previous eras. Current students are very proficient at helping one another over social and psychological problems. Sometimes complaints about today's students seem to be based on envy of their complacency or perhaps disappointment that they do not present problems with which adults can help.

It seems paradoxical to refer to the time of the Cold War and the hydrogen bomb as a period of relative stability. I do not, of course, mean actual stability, or stability in any fundamental sense; for, as we all know only too well, there could be an explosion at any time. Perhaps we should rather describe the state of the world as one of rigidity, a state in which there is widespread feeling that one must not move lest something snap. But people cannot live in the condition of being constantly poised to run for cover. So, wishing for stability, it is easy to convince one's self that everything is fine and will stay that way. Students, at any rate, tend to see present arrangements in our society as likely to persist indefinitely, and they are able to face the future with bland optimism about their own prospects.

Granting that the current scene may be one marked more by rigidity than by stability, the contrasts with other recent periods of our history are none the less marked. We are not now experiencing anything like the excitement, the mobility, the ferment of the jazz age, or the depression, or World War II. Correspondingly there is relative quietude on the intellectual and ideological fronts. In the early years of the century we had the movement toward greater freedom for women; in the '20's we had Freud and the revolution in

> morals; in the '30's we had the depression, social change, and the influence of socialist economic theory; in the '40's the war, fervent democratic idealism, imaginative postwar plans. What are the big ideas of the '50's? The automatic anticommunism of recent years has not been exactly inspiring. Efforts to bring about a return to religion or to evolve a new religious outlook have been rather feeble—in some cases, perhaps even phony. One does not hear much intellectual discussion on the campus for the simple reason that there is not very much to discuss. Times will undoubtedly change, and new ideas will appear, but for the time being we are in cultural and intellectual doldrums. This I would posit as a major source of student lethargy.

In concluding this section it should be noted that two books have been published very recently which emphasize the positive qualities of students or at least the potential of many students for development of character or moral qualities considerably beyond their present levels. These are *The College Influence on Student Character* by Edward Eddy and associates (24) and *They Come For the Best of Reasons* by Max Wise (78). These books tend to place stress upon qualities of openness to learning or new experience or dissatisfaction and honest search for truth or meaning that one may find in students, if one penetrates beyond somewhat superficial or surface knowledge of them. It may be that these qualities of students are not adequately revealed by various questionnaires, tests, and similar quantitative studies. It was the opinion of the Mellon Foundation staff that interview studies of Vassar students often revealed a depth or complexity of experience that more objective methods of study had not made quite so manifest.

Remarks like those quoted above by Sanford on the general intellectual lethargy of our times and books like those of Eddy and Wise have tended to focus attention on defects of leadership in our colleges. There is a considerable body of feeling, perhaps best expressed in Eddy's book, that more inspired teaching, educational planning, and the like would be amply rewarded by enthusiastic student response.

Changes in Personality

Change in personality during the college years is an area in which research has hardly begun to scratch the surface. Not that no studies exist in this field, or very few. The number of studies, as such, is not small. In fact, the researches reported in the previous section on changes of attitudes and values very likely should be considered as falling within the purview of changes in personality. That is, attitudes and values may be regarded as elements that may be subsumed under the rubric of personality. What is lacking, however, is a systematic or comprehensive design for organizing disparate studies and for conceptualizing the whole proc-

ess of personality development during the college years or from age 18 to 22.

Sanford defines education in its traditional sense, that is, as knowledge of our cultural heritage. Maturity for him is the quality which essentially distinguishes children from adults, the predominance of the controlling, discriminating, analyzing, and decision-making functions over the passionate or impulsive functions. Health is the capacity to manage strains, to remain stable while dealing with complexity, difficulty, or crisis. Attempts may be made to assess progress to one or another of these goals independently of the others.

Designs like those of Sanford and White offer the prospect that eventually the disparate phenomena of change in the college years may be organized in systematic fashion. Eventually we may hope to have end-points and units of measurement of change in personality corresponding to those we now have for intellectual and physiological growth.

As was mentioned earlier, educational and social scientific publications contain a fair number of reports of studies of personality change during the college years. A good summary of most of these studies may be found in Webster (73). Lacking the context of a longitudinal theory of personality development most of these studies report changes on one test or measure over a fairly brief period of time, for example, one year.

Probably the most comprehensive study of personality development during the college years is that being carried out by the Mellon Foundation at Vassar College (34, 62). Vassar students and alumnae have been studied over a 7-year period by means of tests and interviews. The test studies have centered on the nature of the differences between freshmen and seniors, while the interview studies have attempted to shed light on the factors operative in the college situation which bring about these changes.

It was mentioned earlier that until fairly recently social scientists tended to view personality development in the college years as pretty much a function or reflection of earlier events. That is, the personality was thought to be fairly well "jelled" by the age of 18, if not 15 or perhaps even 5 or 6. Of late, however, evidence has been accumulating that there are important and systematic personality changes taking place during the college years. The Mellon Foundation at Vassar College and studies at Yale (75), Harvard (36), and Princeton (40) Universities and at Sarah Lawrence College (51) demonstrate this phenomenon. Psychologists like Erikson (25, 26, 27), White (76), and Sanford (60, 61, 62, 63) are at work evolving theories by which personality development or growth during the college years may be conceptualized and evaluated.

Such theorizing offers the prospect of agreement upon goals or phases of personality development which are readily translatable into the rhetoric of educators or liberal education. Thus, White (76) conceives of the developmental "tasks" of late adolescence or the college years as the freeing of interpersonal relations, the humanization of conscience, the achievement of ego-identity, and the deepening of interests. Many of the goals of liberal education that one may glean from a reading of our college catalogues have a similar ring, e.g., "awareness of other people and other cultures, a sense of one's place in history and in society, independence of judgment, or a sense of reality."

Similarly Sanford (63) presents criteria by which we may distinguish among such goals of development as educatedness, maturity, and health. These are defined in such ways as to be conceptually independent of one another. Such distinctions are of great value, for too often one all-encompassing goal of development is posited in such a way as to make its definition and evaluation almost impossible. Thus, on occasion, education or maturity are so defined as to include every conceivable positive quality or virtue. Finer conceptualizations offer considerably greater opportunity for evaluation and research.

Three tests have been developed which encompass the major differences between freshmen and seniors. These are the Developmental Status Scale, the Impulse Expression Scale, and the Social Maturity Scale. On all of these scales seniors score higher than freshmen.

The Developmental Status Scale measures the following characteristics (that is, high scorers or seniors possess more of these qualities): freedom from compulsiveness, flexibility and tolerance for ambiguity, critical attitudes toward authority (including parents or family, the state, organized religion, rules, and the like), mature interests, unconventionality or nonconformity, rejection of traditional feminine roles, freedom from cynicism toward people, and realism. The findings on the Impulse Expression Scale are somewhat similar. This scale reveals that seniors display more of the following traits as compared to freshmen: dominance, aggression, autonomy, need for recognition, and need for change and stimulation.

The Social Maturity Scale is a measure of authoritarianism (1), a personality syndrome which has yet to be defined with precision but which nevertheless is predictive of behavior in a variety of situations. Authoritarian qualities, those possessed by *low* scorers on the Social Maturity Scale or freshmen as compared to seniors, are the following: rigidity, intolerance of ambiguity, punitive morality, submission to power, conventionality, cynicism, and anti-intellectualism.

The differences between freshmen and seniors at Vassar College have been summarized as follows:

> * * * the seniors are more educated and more mature but less "feminine" and less stable.
>
> That seniors are more educated in the sense of having more knowledge of their cultural heritage can be taken for granted. Undoubtedly the decreased authoritarianism and conventionality, and the increased tolerance, religious liberalism, and value for the intellectual are in some part due to this process of education; and the same may be said for the increase in cultivated tastes and interests and in the attitudes of skepticism and criticalness.
>
> In stating that the seniors are more mature we mean that they have gained both in expression of impulse and in mechanisms of control * * * lower scores on the authoritarianism scales and other findings, for example, that seniors can be high on the social dominance and confidence scale but still admit difficulties, are evidence of increased differentiation, discrimination, and mastery.
>
> Being less "feminine" is closely related to being more educated and more mature. Increasing acceptance of intellectual values, decreasing stereotypy in the perception of the sexes and of sex roles, increasing differentiation in the conception of what one can do without endangering one's feminine identity are bound to make for lower scores on the traditional femininity scales.
>
> Evidence from * * * the developmental and impulse expression scales leaves no doubt that seniors are more unstable, more disturbed, or one might better say more "upset," than are freshmen * * *. One might say that if we were interested in stability alone, we would do well to plan a program designed to keep freshmen as they are, rather than to try to increase their education, their maturity, and their flexibility with respect to sex role behavior. Seniors are more unstable because there is more to be stabilized, less certain of their identities because more possibilities are open to them. Processes making for differentiation and complexity have run somewhat ahead of processes making for equilibrium (62, p. 41).

The question of the representativeness of these findings is, of course, important. That is, to what extent are these changes which occur between the freshmen and senior years at Vassar College characteristic of other college women? The Mellon Foundation has data from other colleges bearing on this matter. It appears that the same kinds of trends hold at colleges other than Vassar, even at colleges quite different in organization or curriculum or in the intellectual and socioeconomic backgrounds of the students in attendance. As one would expect, in some cases women at other colleges differ considerably from Vassar students on various scales or measures. But nevertheless the same kinds of trends obtain between freshman and senior year. Of course, the similarities and differences between male and female students in the various characteristics previously described is at present an open question, one on which research is needed.

Studies of the College as an Institution

A logical sequel to discussion of the changes that take place during the college years is attention to the forces that bring about such changes. How are students influenced by the content of their courses, by readings, by the personal qualities of faculty members, by association with other students, or by people and events beyond the actual college confines? Such issues are, of course, exceedingly complex, and most researches that have been carried out to date on changes in students during the college years largely ignore these considerations.

Studies of colleges as institutions in which students are "socialized," as societies in which a great variety of knowledge is absorbed in formal or informal ways, are discussed below under two headings: Student Culture and Society and Characteristics of Faculty and Teaching.

Student Culture and Society

A pioneering study of student culture and society was Angell's *The Campus—A Study of Contemporary Undergraduate Life in the American University* (2) published in 1928. Angell presented a systematic account of student life at one of our large universities. The parallels between conditions in the mid-1920's and now are striking. Newcomb's *Personality and Social Change: Attitude Formation in a Student Community* (53) was published in 1943. Newcomb demonstrated a close relationship between the prestige of students among fellow students and attitudes held by students. That is, on the campus under study in the late 1930's liberalism of political and social outlook tended to be associated with prestige among one's fellow students. Conversely, conservatism of outlook tended to be associated with somewhat lower esteem and popularity.

Since 1943 a number of articles have been published which describe campus society and culture in American colleges. Prominent are those by Becker and Geer (5, 6), Brookover (10), Bushnell (16), Davie and Hare (21), Freedman (30), and Smucker (64). These studies emphasize the potency of student culture and society in influencing the educational process for better or for worse.

In this connection Freedman (30, p. 14) says the following:

> We believe that a distinguishable culture exists * * *. The student body as an entity may be thought to possess characteristic qualities of personality, ways of interacting socially, types of values and beliefs, and the like, which are passed on from one "generation" of students to another and which like any culture provide a basic context in which individual learning takes place. We contend, in fact, that this culture is the prime educational force at work

in the college, for, as we shall see, assimilation into the student society is the foremost concern of most new students. Suffice it to say now that in our opinion the scholastic and academic aims and processes of the college are in large measure transmitted to incoming students or mediated for them by the predominant student culture.

Characteristics of Faculty and Teaching

Despite the complexities of research on the classroom situation and the effects of various kinds of classroom climates on the outcomes of teaching, a number of such researches have been carried out. An account of this kind of research may be found in a paper by Stern (65). Pace and Stern have developed an instrument called the College Characteristics Index (54), which is an ingenious device for evaluating and measuring the extent to which colleges are similar or different in general atmosphere. By means of the College Characteristics Index colleges may be characterized according to whether students are treated formally or informally by faculty, whether faculty demands upon students are heavy or light, whether the general teaching procedure emphasizes lecturing versus freer discussion, and the like. Stern (65) has developed an Activities Index which is the counterpart for the individual student of the College Characteristics Index. That is, the Activities Index measures the extent to which a student's dispositions or needs may be "congruent" or "dissonant" to the general climate of the college. For example, one may evaluate the extent to which a student is somewhat dependent in the learning situation, that is, requiring of external or faculty suggestion and direction, and the extent to which the college he attends is likely to be one which generally meets such needs.

Evidence has been accumulating that the College Characteristics Index and the Activities Index will be of great value in research in higher education. For example, Thistlethwaite (67) reports a study which demonstrates a relationship between motivation to seek the Ph.D. in arts, humanities, and social sciences and certain measures of faculty behavior taken from the College Characteristics Index. According to Thistlethwaite, "The following traits seem to characterize faculties outstandingly successful in encouraging undergraduate students to get the Ph.D. in the arts, humanities and social sciences: (I) excellent social science faculty and resources, (II) a high degree of energy and controversy in instruction, (III) broad intellectual emphasis, (IV) frequent contacts with students outside the classroom, (V) a flexible, or somewhat unstructured, curriculum, (VI) emphasis upon independent study and the development of a critical attitude, (VII) excellent offerings in the arts and

drama, (VIII) relatively infrequent appraisals of student performance."

In summary, it can be said that social scientific research on college populations has already reached a stage of development where it can be useful in the selection and analysis of the student body, the planning and evaluation of curriculums, the determination of teaching outcomes, the persistence of college effects upon alumni, and the establishment of institutional profiles.

Instruments have already been developed and validated to measure some of the intangibles under examination. To continue this line of inquiry there is a need not only for instruments to quantify forces in the collegiate society not yet measured. Before this area can be thoroughly understood there must be a coordinated effort in the social sciences, especially between the sociologist and the psychologist, to identify and define as many of the noncognitive quantities as can be isolated. This effort could very well open the door to a vastly increased knowledge of what happens to our youth during and after college that has not been measured by present course examinations and grade systems.

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